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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,380	03/01/2004	Kevin Bruce Black	7654-3	2682
30448	7590	09/01/2005	EXAMINER	
AKERMAN SENTERFITT P.O. BOX 3188 WEST PALM BEACH, FL 33402-3188			TWEEL JR, JOHN ALEXANDER	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/790,380

Applicant(s)

BLACK ET AL.

Examiner

John A. Tweel, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **White** [U.S. 4,075,614].

For claim 1, the detector taught by **White** includes the following claimed subject matter, as noted, 1) the claimed detection device is met by the fire detector (No. 16), 2) the claimed sound producing device is met by the audible alarm (No. 25) for producing an alarm, 3) the claimed housing is met by the housing portions (Nos. 11 and 12) containing the sound producing device and detection device, and 4) the claimed sound quality enhancement chamber is formed by said housing portions forming a resonant element (Col. 5, Lns. 21-25) wherein the enhancement chamber is in communication with the sound producing device for increasing the quality of sounds produced by the sound producing device. The Examiner understands that the reference mentions a fire detector as opposed to a smoke detector. However, fire detectors and smoke detectors have been interchangeable for some time, as both detect the presence

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of a hazardous fire condition. Also, where there is fire, there is smoke.

Therefore, the fire detector found in the reference can be considered a type of smoke "detector". This is considered an obvious variation of the prior art.

For claim 2, the enhancement chamber is partially formed by an inner surface of the housing (No. 12) and a plate positioned within the housing, in this case the mounting board (No. 18).

For claim 3, the assembled housing forms a seal between the mounting board and housing through said detection means.

For claims 4 and 5, a gap exists between an edge of the mounting board and the inner surface of the housing as seen in Figure 2, the gap extending around the edges of the plate.

For claims 6 and 7, the volume is not considered a patentable innovation as many different volumes can produce customized results that have no bearing or weight on the operation of the resonance chamber. As no new or unexpected result occurs from changing the volume of the chamber slightly, this is considered an obvious variation on the prior art.

For claim 8, the chamber of **White** is vented (No. 15).

For claim 9, the audible alarm of **White** is proximate to an inner surface of housing portion No. 12.

For claim 10, the vents and openings (No. 15) of **White** form a type of "grill" pattern.

For claim 11, the **White** reference describes the interior of the housings as "concave", forming a hemispherical, albeit star-shaped chamber.

For claim 12, the detector taught by **White** includes the following claimed subject matter, as noted, 1) the claimed detection device is met by the fire detector (No. 16), 2) the claimed sound producing device is met by the audible alarm (No. 25) for producing an alarm, 3) the claimed housing is met by the housing portions (Nos. 11 and 12) containing the sound producing device and detection device, and 4) the claimed sound quality enhancement chamber is formed by said housing portions forming a resonant element (Col. 5, Lns. 21-25) wherein the audible alarm is contained substantially within the housing portions. The Examiner understands that the reference mentions a fire detector as opposed to a smoke detector. However, fire detectors and smoke detectors have been interchangeable for some time, as both detect the presence of a hazardous fire condition. Also, where there is fire, there is smoke. Therefore, the fire detector found in the reference can be considered a type of smoke "detector". This is considered an obvious variation of the prior art.

For claim 13, the enhancement chamber is partially formed by an inner surface of the housing (No. 12) and a plate positioned within the housing, in this case the mounting board (No. 18).

For claim 14, the assembled housing forms a seal between the mounting board and housing through said detection means.

For claims 15 and 16, a gap exists between an edge of the mounting board and the inner surface of the housing as seen in Figure 2, the gap extending around the edges of the plate.

For claim 17, the chamber of **White** is vented (No. 15).

For claims 18 and 19, the volume is not considered a patentable innovation as many different volumes can produce customized results that have no bearing or weight on the operation of the resonance chamber. As no new or unexpected result occurs from changing the volume of the chamber slightly, this is considered an obvious variation on the prior art.

For claim 20, the audible alarm of **White** is proximate to an inner surface of housing portion No. 12.

For claim 21, the vents and openings (No. 15) of **White** form a type of "grill" pattern.

For claim 22, the **White** reference describes the interior of the housings as "concave", forming a hemispherical, albeit star-shaped chamber.

3. Claims 23-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **White** in view of **Routman et al** [U.S. 5,349,338].

For claim 23, the detector taught by **White** includes the following claimed subject matter, as noted, 1) the claimed detection device is met by the fire detector (No. 16), 2) the claimed sound producing device is met by the audible alarm (No. 25) for producing an alarm, 3) the claimed housing is met by the housing portions (Nos. 11 and 12) containing the sound producing device and detection device, and 4) the claimed sound quality enhancement chamber is formed by said housing portions forming a resonant element (Col. 5, Lns. 21-25) wherein the enhancement chamber is in communication with the sound producing device for increasing the quality of sounds produced by the sound

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producing device. The Examiner understands that the reference mentions a fire detector as opposed to a smoke detector. However, fire detectors and smoke detectors have been interchangeable for some time, as both detect the presence of a hazardous fire condition. Also, where there is fire, there is smoke.

Therefore, the fire detector found in the reference can be considered a type of smoke "detector". This is considered an obvious variation of the prior art. One claimed aspect not found in the reference is a recordable playback device for recording at least one alarm message and playing the message in the event the device detects a fire.

Recordable messages have been used in smoke and fire detectors for some time. The fire detector and alarm system taught by **Routman et al** includes a microphone (No. 25) and record/playback means (No. 15) by which a user can record a vocal message suited for a small child or adult in need of verbal instructions. The obvious advantage is that a familiar voice can be used to give unique warning messages especially suited for small children that can be easily understood.

As the primary reference pertains to a fire detector that is used in the home, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a recordable playback device similar to Routman in the system of White for the purpose of providing children and others with familiar instructions that are easily understood in case of an emergency.

For claim 24, the enhancement chamber is partially formed by an inner surface of the housing (No. 12) and a plate positioned within the housing, in this case the mounting board (No. 18).

For claim 25, the assembled housing forms a seal between the mounting board and housing through said detection means.

For claims 26 and 27, a gap exists between an edge of the mounting board and the inner surface of the housing as seen in Figure 2, the gap extending around the edges of the plate.

For claim 28, the chamber of **White** is vented (No. 15).

For claims 29 and 30, the volume is not considered a patentable innovation as many different volumes can produce customized results that have no bearing or weight on the operation of the resonance chamber. As no new or unexpected result occurs from changing the volume of the chamber slightly, this is considered an obvious variation on the prior art.

For claim 31, the audible alarm of **White** is proximate to an inner surface of housing portion No. 12.

For claim 32, the vents and openings (No. 15) of **White** form a type of "grill" pattern.

For claim 33, the **White** reference describes the interior of the housings as "concave", forming a hemispherical, albeit star-shaped chamber.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



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**Massa** [U.S. 4,297,538] includes a vibrating diaphragm operating at resonance.

**Burnstein et al** [U.S. 4,328,486] has an improved diaphragm and magnet assembly.

**Kojima** [U.S. 4,963,855] has at least one continuous projecting wall extending toward an enclosure.

**Bridges** [U.S. 5,396,221] presents a smoke alarm disguised as a Christmas tree ornament.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Tweel, Jr. whose telephone number is 571 272 2969. The examiner can normally be reached on M-F 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass can be reached on 571 272 2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAT  
8/29/05

A handwritten signature in black ink, appearing to read 'JAT', with a stylized, cursive flourish extending from the end.

**JOHN TWEEL  
PRIMARY EXAMINER**